

PRE-APPEAL BRIEF REQUEST FOR REVIEWDocket Number (Optional)
2340

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to "Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450" [37 CFR 1.8(a)]
on _____

Signature _____

Typed or printed
name _____

Application Number
10/688,157

Filed
October 17, 2003

First Named Inventor
Manish Mangal

Art Unit
2617

Examiner
Anthony S. Addy

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

☐ applicant/inventor.

☐ assignee of record of the entire interest.
See 37 CFR 3.71, Statement under 37 CFR 3.73(b) is enclosed.
(Form PTO/SB/96)

☒ attorney or agent of record.

Registration number 41,962

☐ attorney or agent acting under 37 CFR 1.34.

Registration number if acting under 37 CFR 1.34 _____

Richard A. Machonkin
Signature

Richard A. Machonkin
Typed or printed name

(312) 913-0001
Telephone number

March 10, 2009
Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required. Submit multiple forms if more than one signature is required, see below*.

☐ *Total of _____ forms are submitted.

This collection of information is required by 35 U.S.C. 132. The Information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11, 1.14 and 41.6. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
(Docket No. 2340)**

In re the Application of:)	
)	
Manish Mangal et al.)	Art Unit: 2617
)	
Serial No.: 10/688,157)	
)	Examiner: Anthony S. Addy
Filed: October 17, 2003)	
)	
For: Method and System for Predictive)	Confirmation No. 9209
Resource Management in a)	
Wireless Network)	

REASONS FOR REVIEW OF FINAL REJECTION

Applicants request review of the final rejection mailed December 11, 2008, because the Examiner has clearly erred in rejecting the claims.

1. The Claimed Invention

Applicants' claims are directed to methods and systems for allocating bandwidth among mobile stations. Independent claims 1, 9, and 20, recite functions related to determining a number of active mobile stations and changing the bandwidth allocation algorithm based on that number, as summarized below:

- Claim 1 recites "determining that the number of active mobile stations exceeds a threshold and responsively changing the bandwidth allocation algorithm, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations."
- Claim 9 recites "determining that a threshold number of mobile stations being provided communication services are concurrently operating in the given coverage

area” and “responsively changing the bandwidth allocation algorithm for the mobile stations being provided communication services in the given coverage area.”

- Claim 20 recites “program logic ... to determine that a number of active mobile stations are operating concurrently in the given coverage area and to change the bandwidth allocation algorithm based on the number.”

Claim 16 is directed to a method that also takes into account the amount of voice or data traffic buffered at the base station. Thus, claim 16 recites, *inter alia*, “determining that the number of mobile stations concurrently being provided communication services by the wireless network is below a predetermined threshold number” and “determining that an amount of voice or data traffic buffered at a base station for transmission to a mobile station as part of providing the communication services is above a predetermined threshold amount.”

2. Status of the Claims

Claims 1-24 are pending. Independent claims 1, 16, and 20 stand rejected under § 103(a) as being unpatentable over O'Connor, U.S. Pub. No. 2004/0002339 (“O'Connor”) and Yang, U.S. Pub. No. 2002/0114334 (“Yang”). Independent claim 9 stands rejected under § 103(a) as being unpatentable over O'Connor, Yang, and Choi et al., U.S. Patent No. 6,724,740 (“Choi”).

3. The Examiner's Clear Error

a. Independent claim 1

The Examiner has admitted that O'Connor does not teach “determining that the number of active mobile stations exceeds a threshold and responsively changing the bandwidth allocation algorithm, so as to change how the system dynamically allocates the radio frequency bandwidth among the active mobile stations,” as recited in claim 1. *See* Final Office Action, p. 6. Instead, the Examiner has argued that this element would have been obvious based on O'Connor's

teaching, in paragraph [0057], that when a network bandwidth allocation device receives a “suspend packet” from a mobile device, it realizes that the bandwidth available to the network has increased and can allocate additional bandwidth. *See* Final Office Action, pp. 2 and 7.

The flaw in the Examiner’s argument is that O’Connor’s approach does not suggest the use of a *threshold* number of active mobile stations. The “suspend packet” has nothing to do with the actual number of active mobile stations. Instead, the “suspend packet” indicates a *change* in the number of active mobile devices. That change can occur regardless of whether the number of active mobile stations is above or below a threshold. Put another way, the “suspend packet” indicates to the network bandwidth allocation device that additional bandwidth is available, so there would be no need for the network bandwidth allocation device to determine whether the number of active mobile stations exceeds a threshold.

Because O’Connor’s “suspend packet” approach is fundamentally different than the “threshold” approach recited in claim 1, the Examiner’s obviousness argument is simply impermissible hindsight reasoning. For this reason alone, the Examiner’s rejection of claim 1 is clearly erroneous and should be withdrawn.

The Examiner’s application of Yang is also clearly erroneous. The Examiner has admitted that O’Connor does not teach changing a bandwidth allocation algorithm and instead has relied on Yang for this element. *See* Final Office Action, p. 3. According to the Examiner, Yang teaches that different scheduling algorithms can be implemented for allocating bandwidth among different aggregation classes. *See* Final Office Action, pp. 3 and 7. However, claim 1 specifies that changing the bandwidth allocation algorithm changes how the system dynamically allocates bandwidth among the *active* mobile stations. Yang teaches that each *active network session* is aggregated into an aggregation class. *See* paragraph [0036]. But Yang does not teach

changing the aggregation class of a session while it is still active. Thus, once an active network session is assigned to an aggregation class, the bandwidth allocation algorithm used to allocate bandwidth for that active session does not change. Accordingly, the O'Connor/Yang combination does not teach "changing the bandwidth allocation algorithm, so as to change how the system dynamically allocates the radio frequency bandwidth among the *active* mobile stations," as recited in claim 1.

For this reason also, the Examiner's rejection of claim 1 is clearly erroneous and should be withdrawn.

b. Independent claim 9

Claim 9 recites a "threshold number of mobile stations." As discussed above for claim 1, O'Connor does not teach such a threshold. In addition, claim 9 recites "responsively changing a bandwidth allocation algorithm for the mobile stations being provided communication services." As discussed above for claim 1, the O'Connor/Yang combination does not teach changing the bandwidth allocation algorithm for *active* mobile stations. Accordingly, the Examiner's rejection of claim 9 is clearly erroneous and should be withdrawn.

c. Independent claim 16

Claim 16 recites a "predetermined threshold number" of mobile stations. As discussed above for claim 1, O'Connor does not teach such a threshold.

In addition, claim 16 recites "an amount of voice or data traffic buffered at a base station" and a "predetermined threshold amount" of such buffered voice or data traffic. In rejecting claim 16, the Examiner alleged that O'Connor teaches this element, specifically citing to paragraphs [0057] and [0077]. *See* Final Office Action, p. 6. But nothing in those paragraphs refers to buffered voice or data traffic at all, much less a predetermined threshold amount of buffered

voice or data traffic. Accordingly, the Examiner's rejection of claim 16 is clearly erroneous and should be withdrawn.

d. Independent claim 20

Claim 20 recites program logic "to change the bandwidth allocation algorithm based on the number [of active mobile stations]." As discussed above for claim 1, O'Connor teaches an approach in which the bandwidth allocation is changed based on a *change* in the number of active mobile stations (as indicated by a "suspend packet" from a mobile device), not based on the actual *number* of active mobile devices. In addition, claim 20 recites changing the bandwidth allocation algorithm to change how the system dynamically allocates the bandwidth among the *active* mobile stations. As discussed above for claim 1, the O'Connor/Yang combination does not teach changing how the system dynamically allocates bandwidth for *active* mobile stations. Accordingly, the Examiner's rejection of claim 20 is clearly erroneous and should be withdrawn.

4. Conclusion

For the foregoing reasons, Applicants submit that the Examiner's claim rejections are clearly should be withdrawn and all of the pending claims should be allowed.

Respectfully submitted,

Date: March 10, 2009

By: Richard A. Machonkin
Richard A. Machonkin
Reg. No. 41,962